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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/152,593	09/14/1998	HIROSHI HASEGAWA	BA-22624	9416
178	7590	05/11/2004		
BUCKNAM AND ARCHER 1077 NORTHERN BOULEVARD ROSLYN, NY 11576			EXAMINER DIAMOND, ALAN D	
			ART UNIT 1753	PAPER NUMBER
DATE MAILED: 05/11/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

mk

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/152,593	HASEGAWA ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Alan Diamond	1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 07/634,054.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williamitis (U.S. Patent 2,807,155) in view of Midgley, Jr et al (Re. 19,265) and Kohashi et al (JP 62-292895). JP 62-292895 is already of record on the PTO-892 mailed July 1, 2003 and is an English translation. Said English translation is referred to below.

Williamitis teaches a fluid composition for a refrigerator, wherein the fluid composition contains a refrigerant such as disclosed in Midgley, Jr et al and, as the refrigerator oil, a pentaerythritol tetraester having the chemical formula given at col. 2, line 66 (see also col. 2, lines 23-56). The tetraester may also be of dipentaerythritol or tripentaerythritol (see col. 3, lines 8-20). Midgley, Jr et al is relied upon for showing that the refrigerant can be a chlorine-free fluorocarbon (see the paragraph bridging pages 1 and 2 of Midgley, Jr et al). In the chemical formula at col. 2, line 66, and the chemical formula at col. 3, line 15, of Williamitis, the R groups can be straight or branched chain alkyl of preferably 6 to 10 carbon atoms (see the paragraph bridging pages 1 and 2 of Williamitis). Williamitis teaches the limitations of the instant claims other than the differences which are discussed below.

Williamitis not specifically teach the presence of the instant conventional oil, the instant additive, and 0.1 to 5% by weight of an epoxy compound in the fluid

Art Unit: 1753

composition. Kohashi et al teaches that other oils, such as paraffinic mineral oils, naphthenic mineral oils, alkylbenzene oils, and polyolefin oils can be used together with its pentaerythritol ester for refrigerating machine oils (see pages 2-3 of said English translation). Kohashi et al also teaches the addition of 0.05 to 10 wt% of a glycidyl ester to the refrigerator oil so as to suppress the corrosion of metal components of the refrigerator apparatus and stabilize the oil (see page 3, lines 12-36). Kohashi et al also teaches that additives such as antioxidants and antiwear agents can be used together with the glycidyl ester (see page 4, lines 18-19). Kohashi et al exemplifies pentaerythritol esters (see Table 1 at page 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added the glycidyl ester of Kohashi et al to the refrigerator oil of Williamitis because said glycidyl ester suppresses the corrosion of metal components of the refrigerator apparatus and stabilizes the oil, as taught by Kohashi et al. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have included an oil such as paraffinic mineral oil, naphthenic mineral oil, alkylbenzene oil, and polyolefin oil, and an additive such as antioxidants and antiwear agents, in the refrigerator oil of Williamitis because these are conventional materials that can be present with the refrigerator oil, as shown by Kohashi et al.

3. Claims 4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williamitis in view of Midgley, Jr et al and Kohashi et al as applied to claims 1-3 and 5 above, and further in view of JP 55-155093, herein referred to as JP '093.

Art Unit: 1753

Williamitis in view of Midgley, Jr et al and Kohashi et al, as relied upon for the reasons recited above, teaches the limitation of claims 4 and 6-8 other than the presence of the instant phosphorus compound. JP '093 teaches that the addition of trimethyl phosphate to a pentaerythritol ester refrigerator oil helps to prevent corrosion (see the attached English abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have included the trimethyl phosphate additive of JP '093 in the refrigerator oil of Williamitis in view of Midgley, Jr et al and Kohashi so as to prevent corrosion, as taught by JP '093.

### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-8 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of U.S. Patent No. 6,410,492. Although the conflicting claims are not identical, they are not patentably distinct from each other because the ester in the claims of said patent is an ester obtained from pentaerythritol and a carboxylic acid mixture comprising n-pentanoic acid in an amount

Art Unit: 1753

of 20 to 50% by mass, n-heptanoic acid in an amount of 30 to 50% by mass and 3,5,5-trimethylhexanoic acid in an amount of 5 to 60% by mass. This ester encompasses the instant ester, particularly in view of the fact that the esters prepared in said patent's examples at cols. 7 and 8 are tetraesters. The claimed ester is used with a chlorine-free fluorocarbon refrigerant (claim 9 of said patent), and contains the instantly claimed additives (claims 5 to 7 of said patent). Although the claims of said patent use "comprising" language, whereas the instant claims use "consists of" language, there are no additional required components in the claims of said patent that would be excluded by said "consists of" language. Accordingly, the instant claims are rendered obvious by the claims of said patent.

### ***Response to Arguments***

6. Applicant's arguments filed March 18, 2004 have been fully considered but they are not persuasive.

Applicant argues that the refrigerator oil claimed in the instant application is not obvious in view of the refrigerator oil described in the claims of U.S. Patent 6,410,492. However, this argument is not deemed to be persuasive because the esters in the claims of said patent are species of the generic ester of the instant claims. The n-pentanoic acid, n-heptanoic acid, and 3,5,5-trimethylhexanoic acid will provide for the alkyl carbon atom range for the instant R<sup>1</sup>-R<sup>4</sup> groups

Applicant argues that the application resulting in U.S. Patent 6,410,492 has a PCT filing date of September 2, 1999 and a foreign application date of September 2, 1998, and that the claims of the instant application are entitled to a priority date of

Art Unit: 1753

December 28, 1989, which, applicant argues, "is well before the earliest effective date of the cited patent." However, this argument is not deemed to be persuasive because a patent used in an obviousness-type double patenting rejection does not need to have an earlier filing or publication date.

**Conclusion**

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. EP 430657 A1 is hereby made of record.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan Diamond whose telephone number is 571-272-1338. The examiner can normally be reached on Monday through Friday, 5:30 a.m. to 2:00 p.m. ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alan Diamond  
April 5, 2004

Alan Diamond  
Primary Examiner  
Art Unit 1753

